



Spark Gap

Vol. 35, Issue 4, April 2019 *MARC - Serving Central Indiana Communities for thirty-five years*

On Our MARC:

Welcome Spring and good bye Tax Season!

A big thanks to Bruce, K9ICPP. Bob, N9SUI and Jack, W8ISH for working on getting information together for our 35th Anniversary last month. Bruce, for getting the special event going and Bob and Jack for gathering information for the special edition of the newsletter. We had a good turn out for the meeting and a few old timers came to visit. Again, thanks guys! I really appreciate your hard work!

Our speaker for this month will be Bob Jones on weather. Bob will talk about the weather class that was held at the Sheriff's department in March and I'm sure he will have a lot of information for us.

May is the start of a summer full of Amateur Radio related activities. It kicks off with the Indiana QSO party May 4th, Dayton Hamfest May 17th - 19th, followed by the Strawberry Fest, Saturday June 8th and Field Day, June 22 & 23rd. Hope to see you at one, if not all events.

Hope to see you on Saturday.

Jacki, KI6QOG

President

HAPPY SPRING !!!!



Can Indoor Antennas Work? Yes!

By Dan Romanchik, KB6NU

Recently, a reader asked:

I am studying your “No Nonsense” book as I prep for the Technician test. I am also learning CW. I am going to buy a Yaesu FT 450D as my first radio, and I want to use an indoor antenna as my first antenna. What do you recommend for CW?

I replied:

To be honest, I’ve never had a lot of luck with indoor antennas. Don’t let that dissuade you, though. I have worked many hams with indoor antennas. Just recently, for example, I worked a guy who was using a [Buddipole](http://www.buddipole.com/) (http://www.buddipole.com/) inside his apartment.

If you have an attic, you could easily install a dipole up there. The [ARRL web page on indoor antennas](http://arrl.org/indoor-antennas) (http://arrl.org/indoor-antennas) notes:

“Attics are great locations for indoor antennas. For example, you can install a wire dipole in almost any attic space. Don’t worry if you lack the room to run the dipole in a straight line. Bend the wires as much as necessary to make the dipole fit into the available space.

....

“Ladder-line fed dipoles are ideal for attic use—assuming that you can route the ladder line to your radio without too much metal contact. In the case of the ladder-line dipole, just make it as long as possible and stuff it into your attic any way you can. Let your antenna tuner worry about getting the best SWR out of this system.”

There are plenty of remote tuners now, too. You could install a doublet with elements as long as you can make them, connect them directly to the remote tuner, and then run coax to your shack.

I have also worked guys who have used Slinky antennas inside a house. The advantage of using a Slinky is that it is electrically longer than a wire of the same length.

An attached garage might also make a good location for an indoor antenna. VE3SO, who I’ve worked several times, uses a [magnetic loop antenna installed in his garage](https://www.kb6nu.com/magnetic-loop-antenna-at-ve3so/) (https://www.kb6nu.com/magnetic-loop-antenna-at-ve3so/).

If you do a web search for “indoor amateur radio antennas,” you’ll get many more ideas. Here are a few that looked promising to me:

- [Indoor antenna for 7 Mhz](http://www.iw5edi.com/ham-radio/37/indoor-antenna-for-7-mhz) (http://www.iw5edi.com/ham-radio/37/indoor-antenna-for-7-mhz)
- [An Indoor Reduced Size Rectangular Loop](http://hamuniverse.com/kl7jrindoorloop4010.html) (http://hamuniverse.com/kl7jrindoorloop4010.html)

Another option might be to load up your gutters! I've worked a couple of guy who use gutter antennas, including [WA8KQQ](https://www.kb6nu.com/operating-notes-gutter-antenna-rac-contest-161-countries-worked/) (https://www.kb6nu.com/operating-notes-gutter-antenna-rac-contest-161-countries-worked/) and [K3DY](https://www.kb6nu.com/operating-notes-computer-virus-club-net-gutter-antenna/) (https://www.kb6nu.com/operating-notes-computer-virus-club-net-gutter-antenna/).

This blog post garnered a couple of interesting comments. *K2MUN* wrote, "For many years I've used an attic mounted off-center fed 40 meter dipole. With an automatic antenna tuner and a 4:1 balun I've worked lots of dx with both qrp and, more easily, 100 watts! Certainly, outdoors is much superior but an attic is a nice location in bad weather making playing with your antenna a pleasure :-).

John, KD0JPE, said, 'If you have an attic available, check out the following 6-band coax trap-based antenna: <http://degood.org/coaxtrap/>. I constructed one of these 9 years ago and have had great results with it.

The bottom line is that indoor antennas can definitely work. They may take more work to put up than outside antennas, but as the saying goes, "Any antenna is better than no antenna."



Birthdays for the month of March:

KC9VGQ Chris Mazzarella

KC9WLR Mike Rose

KB9LOT Dave Daily

KC9EBL Brenda Haler

N9LC Steve Brown

W9NMM Noel Mortier

Birthdays for the month of April:

KI6QOG Jacki Frederick

KD9FHI Bob Cloutier

Aging Indy Hamfest needs help!

When was the last time you attended the Indianapolis Communications and Technology Expo at the Marion county fairgrounds? Without your support the local Hamfest days are numbered. After 48-years the aging annual summer event may be coming to an end.

As the event has aged so has the support crew that makes it happen every year. Without some younger blood the Indy event will be a fond memory for thousands of Indiana hams. “Gosh, I wish there was a local hamfest we could go to.”



It's time for a new generation of hams, those 70 years old and younger, to step up and lend a hand to keep the Indianapolis Communications and Technology Expo going. According to long time organizer, Mike Sercer-WA9FDO, the current group has reached their 70s and they are desperately looking for a new crop of amateur radio operators to handle the planning and execution of the two day event. Hamfest organizers are looking for area hams to step up and take the challenge by calling 317-829-6868 or email: wtakin@gmail.com.

This year's 49th and the 2020 Fiftieth Expo could spell the end of a half century local ham radio event if help is not found. On tap are indoor vendor displays featuring many long time Amateur Radio equipment vendors. The flea market has both indoor and outdoor space available for the July 12-13, 2019 event.

In addition to the forums, Bob Burns W9BU, will be on hand to test your new or old rig. Isn't it time we tuned up our participation as well? Call today to get involved.



-Jack w8ish

Here is a short list of Hamfest positions that need filling.

GENERAL CHAIRMAN: Overall responsibility for the operation of the hamfest. Work with the Marion County Fairgrounds. Arrange for parking, golf carts, porta-johns, table rental and other items as needed.

INDOOR FLEA MARKET COORDINATOR: Coordinate the reservation and assignment of indoor space and tables. Keep records of vendors, and forward all proceeds to the Treasurer.
PRIZE BOOTH COORDINATOR: Responsible for set-up and manning of the prize booth. Make P.A. announcements as needed during the show. Field general questions from patrons and help get answers. Suggest prizes and obtain them with approval from the General Chairman.

OUTDOOR FLEAMARKET COORDINATOR: Overall responsibility for layout and parking of outdoor vendors. Collection of fee for outdoor vendors. (requires at least 3 assistants)

Other positions to fill: Treasurer, Public Relations, Facilities coordinator, Data Base coordinator.

Any help in these areas will be greatly appreciated. Anyone interested in becoming involved is asked to join us at our first meeting of 2019. We meet the 3rd Thursday of each month at the Boy Scout Camp Belzer main building. Our meeting time is 6 p.m. If you need more information please contact **Mike Sercher, WA9FDO, any evening at 317-852-7669.**

Congratulations to the following New HAMs that recently passed their exam:

Date Tested	Name	Call Sign	Class
Tuesday, November 20, 2018	Michael E Turner	K9OMT	General
Tuesday, November 20, 2018	Douglas R Loy	KD9LVS	Technician
Saturday, November 17, 2018	Michael E Turner	K9OMT	Extra
Saturday, November 17, 2018	Vyn G Popplewell	KD9MAD	Technician
Saturday, November 17, 2018	Darin J Smith	KD9MAE	Technician
Saturday, November 17, 2018	David J Hart	KD9MAH	Technician
Saturday, November 17, 2018	Michelle D Davis	KD9MAF	Technician
Monday, November 19, 2018	Anthony G Gomez	KD9MAQ	Technician
Monday, November 19, 2018	Keith J Karnes	KD9MAT	Technician
Saturday, December 15, 2018	Vyn G Popplewell	KD9MAD	General

Saturday, December 15, 2018	Anthony G Gomez	KD9MAQ	General
Saturday, December 15, 2018	Timothy E Aldridge	KD9MDZ	Technician
Saturday, December 15, 2018	Ernest R Rodabaugh IV	KD9MEA	Technician
Saturday, January 19, 2019	Christian P Mazzarella	KC9VGQ	General
Saturday, January 19, 2019	James Jones	KD9MGK	Technician
Saturday, January 19, 2019	Timothy E Aldridge	KD9MDZ	General
Saturday, January 19, 2019	Terry A Gulley	KD9LFT	General
Saturday, January 19, 2019	Kenneth D Mullins	KD9MGL	General
Saturday, February 16, 2019	Matthew D Lockwwod	KD9MLJ	Technician
Saturday, February 16, 2019	Jeffrey J Hartwell	KD9MLK	General
Saturday, February 16, 2019	Timothy E Aldridge	KD9MDZ	Extra
Saturday, February 16, 2019	James Jones	KD9MGK	General
Saturday, February 16, 2019	Mark H Colgan SR	W9MHC	General
Saturday, March 09, 2019	Gregory A Gaich	KD9KCE	General
Saturday, March 09, 2019	Gary McNickle	KD9MPK	Technician
Saturday, March 09, 2019	Fred Wiseman Jr	KD9MPS	Technician
Saturday, March 09, 2019	Michael McGraw	KD9MPT	Technician
Saturday, March 09, 2019	Patrick Rose	KD9MPU	Technician
Saturday, March 09, 2019	John Shouse	KD9MPV	General
Saturday, March 16, 2019	Samuel Babbert	KD9MRS	Technician

2019 Indiana QSO Party (INQP) May 4th

The Indiana QSO Party is Saturday May 4th, starts at 11AM and ends at 11PM EDT (1500 to 0300 UTC May 5th).

The objective for Indiana stations is to work all 92 Indiana counties and work as many stations as possible in Indiana and worldwide.

Station operating outside of Indiana the goal is to work all 92 Indiana counties and as many Indiana stations as possible.

INQP allows a number of operating categories including: QRP, low and high power single operator, all-out club efforts, multi-operator high power and multi-multi (multi operator and multi transmitters) operation.

Also included are mobile units and rovers moving from county to county and portable setups similar to Field Day. Plaques are awarded for best in Indiana, out of state efforts, and best individual county efforts!

Indiana Club Competition INQP rules include a category for Club Competition that allows an Indiana Amateur Radio Club to have their members that submit contact-logs for an aggregate club score. Members need to list the club on their entry. Plaque for the club with highest aggregate score and awards certificates for second and third place.

The Indiana exchange is RS(T) plus the county and for all others USA stations it is RS(T) plus state, for Canada RS(T) plus province or territory and all others it is RS(T) plus DX. See INQP site for Indiana county abbreviations. All start with IN and then the county.

<http://www.hdxcc.org/inqp/counties.html>

Logs should be submitted in a digital format, the Cabrillo logging format is preferred. Handwritten logs are accepted but have to be entered manually, so an electronic log is preferred. Logs must be received by June 1st.

The INQP overlaps with a few other QSO parties and contests: the 7QP, NEQP, and the Italian ARI Contest. So, during the INQP many other stations seek contacts from Indiana to fill their logs. The more Indiana stations on the air that day, the more action for everyone!

INQP Activity Map - Once you have made a plan, please e-mail Mel KJ9C kj9c@arrl.net, with the information on what counties and call signs you will activate during the INQP. The HDXCC will list your call and county on the activity map so others will look for you.

<http://www.hdxcc.org/inqp/activity.php>

Logging Software WriteLog, NA, N1MM, N3FJP and LOGic 8 support the INQP. Check details: <http://www.hdxcc.org/inqp/software.html> There is an example for using an XL spreadsheet for an entry.

The HDXCC web site includes the rules, entry categories, county abbreviations and maps, logging software links and operating information for the INQP. <http://www.hdxcc.org/inqp/index.html>

40 meters has the most activity followed by 80 and 20 meters.

The INQP is sponsored by the Hoosier DX and Contest Club (HDXCC)

ARRL Indiana Section

Section Manager: Jimmy L Merry Jr, KC9RPX

kc9rpx@arrl.org



Johnson County residents can attend free training to learn how to respond to disasters. The training is to certify residents for the Community Emergency Response Team (CERT). The training is being sponsored by the Johnson County Community Organizations Active in Disasters (COAD).

The training is at 9:00 AM to 5:00 PM May 11th and 18th at the Trafalgar library, 424 South Tower St. Participants must attend both class sessions to receive their certifications. CERT is an approach to emergency and disaster situations where citizens who are initially on their own to respond to and cope with the aftermath of a disaster can make a difference to safely help themselves, their families and their neighbors.

To register, call 317-560-4188 or email jccoad@gmail.com with your name, phone number, and email address.

..... *Bob N9SIU*



SUPERBOY



HEY, FELLERS AND GIRLS! HERE IS SOMETHING YOU CAN MAKE!

SUPERBOY'S

WORKSHOP

RAZOR BLADE RADIO

THIS AMAZINGLY SIMPLE RADIO WILL RECEIVE LOCAL BROADCASTS, COSTS ALMOST NOTHING AND IS VERY SIMPLE TO MAKE.

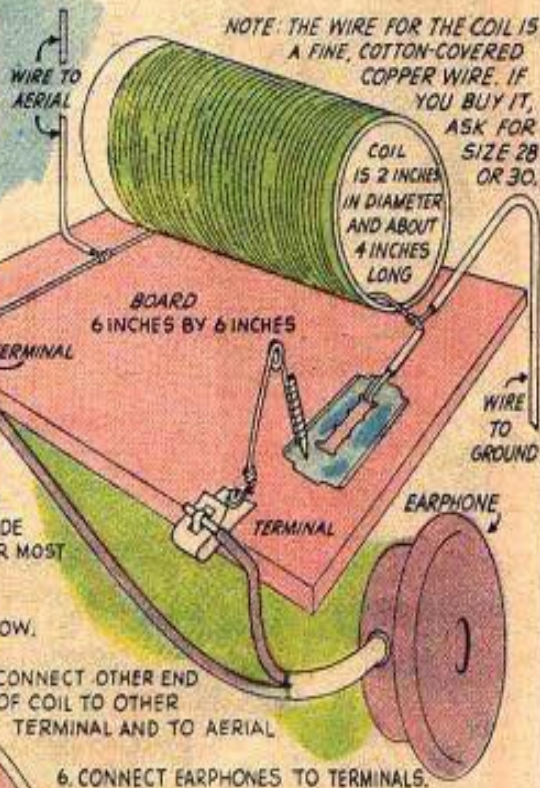


MATERIALS NEEDED

"BLUE" RAZOR BLADE,
EARPHONES, WIRE
SAFETY PIN, BOARD,
PENCIL LEAD,
CARDBOARD TUBE.

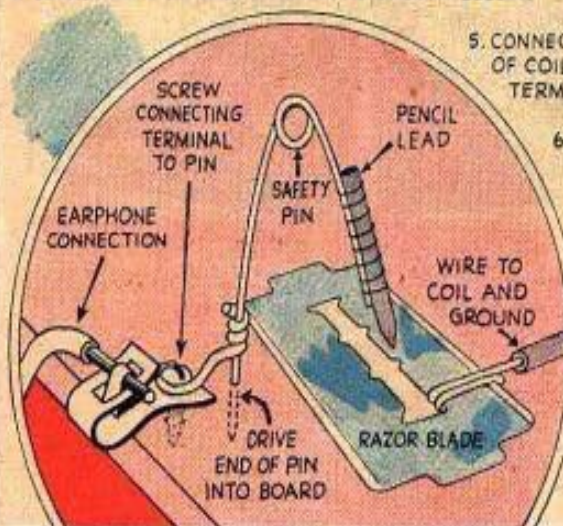
HOW TO BUILD THE SET

1. MAKE THE COIL BY WINDING 120 TURNS OF FINE, COTTON-COVERED WIRE AROUND THE TUBE. FASTEN TO BOARD AS SHOWN.
2. SNIP OFF THE HEAD OF THE SAFETY PIN. ATTACH PENCIL LEAD TO THE SHORT SIDE OF PIN. PUSH POINTED SIDE INTO BOARD. FASTEN TWO TERMINALS (TAKEN FROM DISCARDED BATTERY) TO BOARD.
3. CONNECT ONE END OF COIL TO RAZOR BLADE AND TO A GROUND, SUCH AS A RADIATOR. FASTEN BLADE TO BOARD SO THAT PENCIL LEAD CAN MOVE OVER MOST OF BLADE'S SURFACE.
4. CONNECT PIN TO ONE TERMINAL AS SHOWN BELOW.



NOTE: THE WIRE FOR THE COIL IS A FINE, COTTON-COVERED COPPER WIRE. IF YOU BUY IT, ASK FOR SIZE 28 OR 30.

5. CONNECT OTHER END OF COIL TO OTHER TERMINAL AND TO AERIAL
6. CONNECT EARPHONES TO TERMINALS.



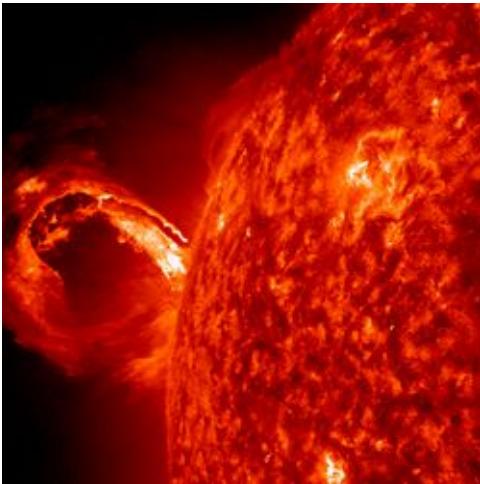
TUNING IN

MOVE THE PENCIL LEAD OVER THE BLADE UNTIL YOU FIND THE SPOTS WHICH GIVE YOU THE BEST VOLUME AND CLARITY. BETTER RESULTS MAY BE OBTAINED BY SCRATCHING THE SURFACE OF THE BLADE WITH A NAIL FILE AND PLACING THE LEAD ON THE SCRATCHES.

IT WILL TAKE PATIENCE TO FIND THE BEST SPOTS. YOU WILL GET BEST RECEPTION AT NIGHT. WITH A GOOD AERIAL YOU WILL GET AMAZING RESULTS.

Solar Cycle 25 Predicted to be Similar to Cycle 24

Scientists predicting the sun's activity for Solar Cycle 25 say it's likely to be much like that of current Cycle 24, which is declining and predicted to bottom out in 2019 or 2020. Solar Cycle 25 Prediction Panel experts said Solar Cycle 25 may get off to a slow start, but is anticipated to peak between 2023 and 2026 with a sunspot range of 95 to 130. This is well below the typical average of 140 to 220 sunspots per solar cycle. The panel expressed high confidence that the coming cycle should break the trend of weakening solar activity seen over the past four cycles. The Solar Cycle Prediction Panel forecasts the



number of sunspots expected for solar maximum, along with the timing of the peak and minimum solar activity levels for the cycle. The outlook was presented on April 5 at the [2019 NOAA Space Weather Workshop](#) in Boulder, Colorado.

"We expect Solar Cycle 25 will be very similar to cycle 24: Another fairly weak cycle, preceded by a long, deep minimum," said panel co-chair Lisa Upton, a solar physicist with Space Systems Research Corp. "The expectation that Cycle 25 will be comparable in size to Cycle 24 means that the steady decline in solar cycle amplitude, seen from cycles 21 - 24, has come to an end and that there is no indication that we are currently approaching a Maunder-type minimum in solar activity."

A 2013 coronal mass ejection. [Photo courtesy of NOAA]

The solar cycle prediction gives a rough idea of the frequency of space weather storms of all types, from radio blackouts to geomagnetic storms and solar radiation storms. In addition to its effects on Amateur Radio signal propagation, space weather can affect power grids; critical military, airline, and shipping communications; satellites and GPS signals, and can even threaten astronauts through exposure to harmful radiation.

Solar Cycle 24 reached its maximum in April 2014, with a peak average of 82 sunspots. The sun's northern hemisphere led the sunspot cycle, peaking more than 2 years ahead of the southern hemisphere sunspot peak. Given that the sun takes 11 years to complete one solar cycle, this is only the fourth time that US scientists have issued a solar cycle prediction. The first panel convened in 1989 for cycle 22.

For Solar Cycle 25, the panel hopes for the first time to predict the presence, amplitude, and timing of any differences between the northern and southern hemispheres on the sun, known as hemispheric asymmetry. Later this year, the panel will release an official sunspot number curve showing the predicted number of sunspots during any given year and any expected asymmetry. The panel will also look into the possibility of providing a solar flare probability forecast.

"While we are not predicting a particularly active Solar Cycle 25, violent eruptions from the sun can occur at any time," said Doug Biesecker, panel co-chair and a solar physicist at NOAA's Space Weather Prediction Center ([SWPC](#)). -- Thanks to NOAA



UP – COMING ACTIVITIES AND HAMFESTS

04/06/2019 – Bartholomew County Fairgrounds Columbus, IN 47201

04/20/2019 -- 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

05/18/2019 -- 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

05/17,18,19/2019 – Dayton Hamvention, Greene County Fairgrounds and Expo Center in Xenia,OH

06/15/2019 -- 0800 MARC Monthly meeting at the Johnson County REMC.

Johnson County REMC 750 International Drive Franklin, IN 46131.

Just Ahead in Radio-sport

- April 13 -- QRP ARCI Spring QSO Party (CW)
- April 13 - 14 -- JIDX CW Contest
- April 13 - 14 -- OK/OM DX Contest (SSB)
- April 13 - 14 -- F9AA Cup, PSK
- April 13 - 14 -- SKCC Weekend Sprintathon (CW)
- April 13 - 14 -- New Mexico QSO Party (CW, phone, digital)
- April 13 - 14 -- Texas State Parks on the Air (CW, phone, digital)
- April 13 - 14 -- North Dakota QSO Party (CW, phone, digital)
- April 13 - 14 -- Georgia QSO Party (CW, phone, digital)
- April 13 - 14 -- Yuri Gagarin International DX Contest (CW)
- April 14** -- **ARRL Rookie Roundup, SSB**
- April 14 -- WAB 3.5/7/14 MHz Data Modes
- April 14 -- International Vintage Contest HF (CW and phone)
- April 14 -- Hungarian Straight Key Contest (CW)
- April 15 -- 4 States QRP Group Second Sunday Sprint (CW and phone)
- April 16 -- 222 MHz Spring Sprint (CW, phone, digital)

See the **ARRL Contest Calendar** for more information. For in-depth reporting on Amateur Radio contesting, subscribe to **The ARRL Contest Update** via your ARRL member profile email preferences.



MID-SATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the **THIRD SATURDAY** of each month at the Johnson County REMC 750 International Drive Franklin, IN 46131.

See our website, www.midstatehams.org, for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a *HAM* to attend our meetings or a member of the club.

WA9RDF Repeater:

146.835/
146.235 MHz
(151.4 Hz PL Tone)

Club Officers:

President: Jacki Frederick – KI6QOG
Vice President: Bill Jackson – KM6CRL
Secretary: Rhonda Curtis – WS9H
Treasurer: Ron Scheutz – K9THR
Repeater Trustee - Chris Frederick – KQ9Y

WA9RDF Repeater:

443.525/
448.525 MHz
(151.4 Hz PL Tone)

Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS
146.835/146.235 MHz (151.4 Hz PL Tone)

The Official Newsletter of the Mid-State Amateur Radio Club

P.O. Box 836
Franklin, Indiana
46131

Spark Gap Editor: Robert LaGrange N9SIU

Please send your articles to my email: n9siu@yahoo.com no later than the 3rd of the month



Special thanks to Johnson County REMC for the use of their community room for meetings and testing.